

### **DETAILED ACTION**

1. The Applicants' amendment was received on March 17, 2008. Claims 1, 2 and 6 have been amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

### ***Allowable Subject Matter***

3. The following is an examiner's statement of reasons for allowance: The closest prior art to Applicant's claimed invention is JP 03297063 to Nobuaki and US Patent 4,157,317 to Nagasawa et al.

Regarding claim 1, the prior art fails to teach a positive electrode current collector for a manganese dry battery comprising: a carbon rod; and either one of a paraffin wax containing hydrocarbon whose molecular weight is 300 to 500 and a microcrystalline wax containing hydrocarbon whose molecular weight is 500 to 800, which is impregnated into said carbon rod, wherein only said wax is impregnated into said carbon rod, characterized in that the endothermic amount of said paraffin wax or said microcrystalline wax per 1 g of said positive electrode current collector obtained by differential scanning calorimetry at 20 to 45°C is not more than 1.0 J/g, and wherein said carbon rod has a density of 1.55 to 1.65 g/cm<sup>3</sup>.

Regarding claim 2, the prior art fails to teach a positive electrode current collector for a manganese dry battery comprising: a carbon rod; and either one of a paraffin wax containing hydrocarbon whose molecular weight is 300 to 500 and a microcrystalline

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wax containing hydrocarbon whose molecular weight is 500 to 800, which is impregnated into said carbon rod, wherein only said wax is impregnated into said carbon rod, characterized in that the endothermic amount of said paraffin wax or said microcrystalline wax per 1 g of said positive electrode current collector obtained by differential scanning calorimetry at 20 to 45°C is not more than 1.0 J/g, and by satisfying the relational expression:  $90Y + 50.5X < 100$  wherein X is the density (g/cm<sup>3</sup>) of said carbon rod, and Y is the entire endothermic amount (J/g) of said positive electrode current collector obtained by differential scanning calorimetry at 20 to 100°C, and  $Y > 0$ , and wherein said carbon rod has a density of 1.55 to 1.65 g/cm<sup>3</sup>

Regarding claim 6, the prior art fails to teach a manganese dry battery comprising a positive electrode current collector: said positive current collector comprising a carbon rod and either one of a paraffin wax containing hydrocarbon whose molecular weight is 300 to 500 and a microcrystalline wax containing hydrocarbon whose molecular weight is 500 to 800, which is impregnated into said carbon rod, wherein only said wax is impregnated into said carbon rod characterized in that the endothermic amount of said paraffin wax or said microcrystalline wax per 1 g of said positive electrode current collector obtained by differential scanning calorimetry at 20 to 45°C is not more than 1.0 J/g, and wherein said carbon rod has a density of 1.55 to 1.65 g/cm<sup>3</sup>

### ***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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